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Intranasal Quetiapine Abuse

TO THE EDITOR: We would like to report on the widespread "abuse" of quetiapine among inmates in the Los Angeles County Jail—"the largest mental health institution in the world." Anecdotal reports from clinicians and staff estimate that as many as 30% of the inmates seen in psychiatric services report malingered psychotic symptoms (typically endorsing "hearing voices" or ill-defined "paranoia") in order to specifically obtain quetiapine. A history of substance dependence is common among those engaging in this practice. In addition to oral administration, the drug is also taken intranasally by snorting pulverized tablets. Such abusive self-administration seems to be driven by quetiapine's sedative and anxiolytic effects (to help with sleep or to "calm down") rather than by its antipsychotic properties. Accordingly, the drug has a "street value" (it is sold to other inmates for money) and is sometimes referred to simply as "quell."

Although the prevalence of this behavior beyond this narrow forensic population is unknown, the possibility of such an abuse potential is both curious and clinically pertinent. For example, it suggests that quetiapine is indeed associated with a better subjective response than its conventional antipsychotic counterparts (1). It also appears to give lie to the clinical myth that only psychotic patients will ask for and take antipsychotic medications. In our collective clinical experience, many patients (in particular, those with substance dependence) complain of "hearing voices" in order to procure hospital admission, disability income, or psychotropic medications (2). The "voices" are usually vague, highly suggestive of malingering (3), and occur in the absence of other symptoms (such as clear-cut delusions or thought disorganization) that would warrant a diagnosis of schizophrenia. While antipsychotic medications are not typically recognized as drugs with abuse potential, the use of intranasal quetiapine suggests otherwise and underscores the importance of recognizing malingered psychosis in clinical settings. This phenomenon is reminiscent of the era before the widespread use of atypical antipsychotic compounds, when a select group of patients would inappropriately seek and self-administer not only anticholinergics, such as trihexyphenidyl (4), but also low-potency antipsychotics, such as thioridazine or chlorpromazine. Finally, since the monosymptomatic "voices" endorsed by patients are often assumed to represent psychosis and therefore lead to reflexive prescription of antipsychotic medications, further investigative efforts aimed at distinguishing this clinical presentation from schizophrenia would be useful. If these entities could be reliably disentangled, it would help to reduce the diagnostic heterogeneity of schizophrenia and the unnecessary exposure of patients to the potentially harmful side effects of antipsychotic medications.

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Atomoxetine and Nonresponders to Stimulants

TO THE EDITOR: Atomoxetine has been recently introduced for the management of attention deficit hyperactivity disorder (ADHD) (1), and a vigorous campaign is ongoing to encourage physicians to write prescriptions for this drug. A media blitz is being directed to consumers, encouraging them to seek this medication. Before this expensive norepinephrine enhancer is used as a first-line medication to treat ADHD, its advantages relative to the generically prescribed stimulants need to be established. Ideally, a placebo-controlled blinded study model such as the one previously used by us to study another norepinephrine enhancer, imipramine (2), should be used. Because the costs of administering atomoxetine are about $90 per month and generic stimulants cost, on average, about $25 per month, atomoxetine's role as a first-line therapy should be supported by research.

With this in mind, we evaluated this drug effectiveness in our clinical program by employing measures used routinely to gather data in our program among children who were nonresponders to clinical trials of stimulants.

Seven patients were selected from our clinic (which was previously described [3]). Their average age was 10.5 years, and their IQ was 75.6. Their IQ is deemed average by the New York City Board of Education in its special education program, in which most children have an artificially deflated performance that is most likely consequent to comorbid learning disabilities. All patients were diagnosed with ADHD by using standard DSM-IV criteria. In accordance with the company's recommendations, we used doses of atomoxetine starting with 0.5 mg/kg/day for 3 days and then increased them up to 1.4 mg/kg/day. Parents of the children consented to treatment in accordance with routine hospital procedure.

We measured behavioral changes at baseline (without drug) and at either 1.2 mg/kg/day or when behavioral exacerbation obligated discontinuation by using the 10-item hyperactivity index derived from the Conners Teacher's Rating Scale (4).

In this open-label clinical observation of children taking atomoxetine, no change was seen. Tests performed between

subjects at baseline (mean=2.66, SD=0.49) and after treatment (mean=2.56, SD=0.51) resulted in t=0.37, df=12, p=0.72, with a 95% confidence interval of –0.48 to 0.68.

Our current clinical observation cautions us that atomoxetine may also be of limited value in children who do not respond to treatment with standard stimulant therapy. The role of atomoxetine needs to be firmly established with a cost-effective analysis if it is to be considered as first-line therapy, and its effectiveness in nonresponders should be demonstrated if it is to be considered for an expensive trial among nonresponders to first-line stimulants.

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Autism, Movement, and Facial Processing

TO THE EDITOR: Ami Klin, Ph.D., et al. (1) showed that a high-functioning autistic adult looked at mouths rather than at the eyes of adults' faces when viewing naturalistic social situations, while a normal comparison adult showed the opposite pattern. According to this argument and others, the authors argued that low orientation to salient social cues embedded in naturalistic situations is a core deficit in autism.

In their Letter to the Editor, Chantal Kemner, Ph.D., and Herman van Engeland, Ph.D., M.D. (2), wrote that when autistic children are shown a static presentation of faces, they do not reach the conclusion of Dr. Klin et al. They argued that the discrepancy between these results is due to a difference in the presentation of facial stimuli, i.e., the dynamic presentation in the study of Dr. Klin et al. versus the static presentation in their own study.

We confirm that low-functioning autistic children are impaired in the processing of physical environmental movement, particularly rapid movement (3), while high-functioning autistic children are much less impaired in the same type of tasks. When biological movement is concerned, autistic children perform relatively adequately in emotional and nonemotional expression-recognition tasks when facial expressions are displayed slowly on video (4). Along the same line, low-functioning autistic children better recognize dynamic facial expressions when displayed slowly than when presented at normal speed. Considering these arguments and others, we proposed the rapid visual-motion integration deficit hypothesis in autism (5). According to this hypothesis, some autistic individuals having major movement-processing disorders from early in their lives will avoid rapid physical and biological movements (considered as aversive stimuli), thus disrupting secondarily social interaction. Some of these individuals, or some autistic persons having minor motion-processing disorders, will search for, habituate themselves to, and learn to handle and cope with such kinds of stimuli. To summarize, rapid visual-motion processing deficits constitute a core neuropsychological marker of autism and secondarily account for the deficit in social interaction.

Thus, when the autistic subject focuses on the mouths of adults' faces in the study by Dr. Klin et al., he or she probably attempts to capture facial speech information that is difficult to process accurately and efficiently in naturalistic social situations while avoiding looking at the fastest facial movements (i.e., saccadic eye movements).

Therefore, discrepancies between the results of Dr. Klin et al. and of Drs. Kemner and van Engeland might be due to the severity of autism in the subjects tested in their respective studies and to the kind of presentation of facial stimuli.

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Dr. Klin and Colleagues Reply

TO THE EDITOR: We thank Dr. Gepner for his letter concerning our article and the letter of Drs. Kemner and van Engeland discussing their findings (1) relative to ours. A word of accuracy, however, needs to precede our reply. Drs. Kemner and van Engeland were not reacting to our review in the *Journal* (that included a single case illustration) but to our case-control series, which appeared in the *Archives of General Psychiatry* (2). And it was our suggestion (3), not that of Drs. Kemner and van Engeland, that the discrepancy in results between the two studies could be due to the type of stimuli used in the two studies: static, i.e., pictures, by Dr. Kemner and her colleagues (1) versus dynamic, i.e., videotaped social situations by us (2).

Dr. Gepner's hypothesis of a rapid visual-motion integration deficit in autism is interesting, but we must take issue with his explanations of our data. First, Dr. Gepner hypothesizes that some individuals with autism may avoid rapid physical and biological movements (considered as aversive stimuli), which would, developmentally, disrupt social interaction. In our clinical experience, young children with autism may in fact be fascinated with rapid movements, particularly if these are repetitive or create unusual sensory sensations (e.g., shining reflections as in spin-top or repetitive patterns like in a computer screensaver). As in many areas of perceptual research in autism in which a basic process was proposed to underlie more global visual attention to social stimuli, we